KABUL EMERGENCY WATER AND SANITATION PROJECT

A Field Review Report By:
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July 19 – 20 1999

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The main objective of this visit (July 19 – 20 1999) was to have a General Review of the current operational status of Kabul Water and Sanitation project which has been initiated by CARE. Here we will also have a view on the background of CARE assistance in this livelihood area, which has been crucial to the population of this war-devastated city.

The information presented in this report is based on a rapid briefing by **Eng. Dad Mohammed,** Kabul Water and Sanitation project field supervisor and a visit of the water supply project sites and their related distribution networks in *Nasaji* and *Alauddin* linked residential areas.

The highlights of CARE interventions in supporting water and sanitation needs in Kabul are briefed as follows:

1 – Development of a water supply system from a local karez in 1994:
This presently existing system is basically relied on a source of under ground water traditionally established as a *karez* (underground water channel). The *Karez* that is called Karez of Deh-e-Araban is located in "Qargha" area in west of Kabul City. CARE has cleaned and repaired this local under ground water source in 1994. At the present time, without any reservoir and pumping power, about 12500 populations of *Bagh-e-Bala*, *Karta-e-Parwan*, and *Parwan* (section-2 and 3) are receiving water (about 20 liters per person.) through this gravity run system. The out put capacity of the system is about 30 liter per second and Water is distributed through *Bagh-e-Bala* water distribution network.

2 –**Rehabilitation of Afshar water supply system in West of Kabul, 1995:**
This system originating from previously established 5 deep wells is located in *Niyazbig* area close to *Qargha*, in the west of Kabul. CARE rehabilitated it in 1995. After installation of generator and complete rehabilitation it was transferred to Solidarity for providing the running cost. During the Polly

technique issues (disagreements) between the government and the NGOs, solidarity stopped providing assisting for the running of this system.

This main water supply system with the two reservoir *Polly technique 5000 m3, Bagh -e bala, 1200 m3 and a third reservoir in Dehkepak for Khair khana (5000 m3),* are non operational at the present time an organization called RADA is trying to solve the problem and make this system operational in supplying water to the people again.
.All of the population under this net work (*Police housing colony, the large urban area of Khairkhana at north of Kabul and Tahiya-e-muskan)* which used to obtained potable water from this system are at the present time at disparate need for potable water. They are all dependent on shallow residential wells or on a limited number of hand pumps installed by some of the assisting organizations in some of the street of these areas.

Related to sanitation and environmental cleaning, in 1994-1995 CARE removed 16000 m3 human solid waste from large residential areas of *Khairkhana, Tahiya-i-maskan, district and Police housing Colony* of Kabul city to an open dumping area of *Dsht-i-chmtala* in the north-east of this city. This operation, which is required every year, has remained undone in these residential areas and in some of the public building during the last five years. This situation is definitely inflecting a penetrating environmental pollution with highly contaminating effects on shallow residential wells and on the open environment of these housing areas.

3- Rehabilitation of Nasaji water supply and sanitation system in 1996:

This system is consisting the following three components:
A- The rehabilitation of 3 deep wells and pumping system: These wells are located in the far southeastern area of Kabul. In this location, previously there was a textile factory therefore, the Presently CARE focused water supply rehabilitation project is called Nasaji *(textile factory)* water supply project. During the previous government times (before the Russian invasion and the brutal civil war), 10 deep wells were drilled just adjacent to the Logar revere in south of *Bagrami* district. These wells were badly damaged during years of factional military conflicts and looting in Kabul.

CARE in 1996 took an emergency initiative and rehabilitated 3 of the 10 highly damaged wells. The other 7 damaged wells became the commitments

of other organizations, which later on (during Taliban power) they were compelled to leave and their commitments remained unachieved.
Due to shortage of CARE operating budget, from the 3 rehabilitated wells completed with Pumps and generators in 1996, just two of them (well No.1 and No.3) are presently kept operating. The two operating pumps each have a capacity of 30 lit / sec. and presently it is providing water for 5000 people, however it is design for 6000. Because of disparate need of the population, 3000 more beneficiaries have been added to the existing water distribution network. This coping strategy is based on a very strict rationing of water within the residential areas, which called *Qala--e-Ahmad Khan.*

The technical setup of *Nasaji water supply system*, currently includes, 3 wells with pumps and generators (two in operating position), a booster reservoir (120m3) and a booster-pumping unit, and a main reservoir (1000m3), which is linked with the gravity distribution network in the area. During a quick observation of the residential area of "Karta-e-now ", it was known that in some of the streets because of the problem of slope / less water pressure and less daily time for water flow from the reservoir, people had trouble in getting enough water from their home or street facet stands. A woman when she saw the CARE vehicle, in the street, came close and complained about the shortage of water to the field supervisor Eng. Dad Mohammed. She said; " *even in an interval of two to three days houses in our street are not getting enough water ... what should we do?* " In front of one of the Main street facet stands, *a long line of waiting adults and children were seen with containers and buckets for fetching water to their homes.* Inside of a house we were allowed to see a residential facet stand surrounded by many small and large containers, pots and buckets of the house owner, brought out for taking and storing water. I asked the young house owner, if some of his neighbor who cannot collect water from the system could come and collect water from his inside the house facet stand? He replied that the *amount of water and the time of the water flow are so limited that we barely obtain water for our own family needs only.*
In *Qala-I-Ahmad Khan*, an adjacent housing area *to Karta-e-Now*, only 50 Street facet stands are installed for providing water to the households only in each two days intervals and for only short hours.

***B-The Drainage System in Nasaji Area*:** Previously the *Nasaji* area of *Bagrami* district of Kabul was a wide swampy land area with high water table, which was salty. CARE has dug about (7. 5Km) main drainage canal and (30 Km) sub- drainage and (32 Km) side ditches masonry has been

constructed. In addition to these a (3 km) branch road from the main road and a bridge on this road to reach to the pumping units of the three wells has been constructed also. These activities have reclaimed the high water tablelands of wide Bagrami basin into a suitable agricultural land and a farming area. The drainage out flow is washed to the Logar revere, close to the south direction of the area.
The residential wastewater drainage and the flood drainage system from *Karta-e-Now* and southeastern section of the *old city* is constructed by CARE and it is connected to Nasaji drainage system.

This residential area drainage network with all of it's auxiliary branches Connected to Bagrami drainage system has a total length of 30 km. Through the construction of the flood drainage and flood protection system within the residential areas, from 500 – 1000 houses has been protected from flood damages. CARE has rehabilitated / remodeled, 4000 latrines in "*Rahman Mena*" south of "*Karta-i-now*" and in *Allaudin* water supply related areas in the west of Kabul.

C-Hygiene Education / Health Training: A CARE supported hygiene training program to females in Nasaji water system areas has-been implemented by professional assistance from the ministry of public health. The effect of this assistance has brought down the rate of water born diseases from 40% before the training to 8% at the present time.
D-Sanitation work in District (10, & 4) of Kabul: In 1998, 38 Km of side ditches/ Wastewater drainages has been constructed in District 10 and 4 of Kabul.

4- Rehabilitation of Alauddin Water Supply System in 1998:
This system is located in west Central area of Kabul. CARE has stared restoration of this system in Jan. 1997. It has four wells and three of that are operational at the present time. These wells, which are providing potable water for 17000 families, are as follows:

A- ***The Elmo-Furhang Operating Well:*** It is located *in Deh-e-Mazang* area of Kabul opposite to the destroyed Russian built "*cultural center*" on the west side of the large Darulaman *Road*. This deep well water source with the capacity of 35 lit./ sec. is supplying water to the *Ataturk Hospital, Kabul university, Ministry of Agriculture upper hill- side residential* area, and to some areas of *Karta-e-sakhi*. Housing sections.

Guided by Eng. Dad Mohammed field supervisor Kabul Water and Sanitation project a quick visit to this housing area were made,

The households met at the east hillside of the ministry of agriculture were mostly displaced people from Ghorband northwest area of Kohdaman valley. Sense the houses are located at a steep hillside, some of the female members of the families came out and expressed complains about the shortage and strict rationing of water. It was said that upper hillside residents are coming down for collecting water from the *roadside installed facet stands. Which* remain open for three hours every alternate day. Engineer Dad Mohammed said that some of the houses have already fixed under ground *Chamber valves,* The (Wat. San.) Project will open some of these valves and ask the related households to keep it open for the nearby families to collect water. In one of the houses, inside there were two facets stands as it was fixed in the previously built network.

B-Two operating wells in Alauddin area: One of these wells are located close to the south side of Russian embassy and an other in Alauddin pumping station compound adjacent to western side of Darul-Aman large road. The total capacity of these operating pumps are 70 lit/sec and just Allaudin is operative now with water delivery capacity of 35 lit./ sec and it is rationed to 3 hours /day in each alternate day for the residential areas. Kabul University as it is mentioned; water is delivered by CARE from *Elmo-Furhang* well every day.

From these two operating pumping centers in *Allaudin*, water is distributed to the housing area of "*Karta-i-Char*", "*Teachers Training Center*" and the related surrounding areas, to the "*Kota-e- Sangi*" wide housing area, and, to "Karta-e-3" ," "Kart-e-4", "*Deh-i-Bori*", "*Sara-e-Ghazni*", " *Pul-i-Sukhta*"and " *Chamchamus*t residential regions.

Water from both of these systems are directly pumped to the net work however there exist the large reservoir of "*Dehmazang*" which has a total capacity of 7500 m3 and located to the south slope of Kabul TV tower mountain. This large reservoir was constructed in 1957 and it has three inside partitions structures, which are linked to each other, is not used at the present time because of limitation of budget/fuel.

The "in-pumping pipe" and the "outlet" distribution pipe linked to the distribution network are the same and have a special controlling system.

CARE has cleaned this reservoir in 1998, only expecting to be used as a distribution source, however as it was said, water is directly distributed through the pumping system, not through the reservoir.

C-The Kabul University and teachers training center wells:
The first well has been rehabilitated by Solidarity, however due to the absence of the assistance of that organization and the need situation of the university, CARE is directly pumping and distributing water to the university from *Elmo-Farhang* pumping station located in *Dehmazang* area of Kabul. To south of the university, the "*teachers training center well*" was left non-operative (without a generator and pump) by Solidarity. CARE has provided a generator for this well, but the pump is still not provided by the Soliderity therefore due to these shortages of budget, and facilities this well is also not operative at the present time.

CARE Kabul Water and Sanitation Project Accommodation within the Constraints

1)- From the three deep wells restored / rehabilitated by CARE in Nasaji area of Bagrami district, Just 2 are kept in operation. The main constraint to this situation is the running cost (fuel, *repairs, and the salaries of the skilled operating staff)*. Beside the CARE 16 operating staff of the project, a group of 32 government employed skilled and non skilled staff that are working in the project are provided support salaries (payments) through CARE labor budget.

2)-From the four rehabilitated wells in Allaudin water supply system, Three are operative at lower than actual capacity. *Fuel, spare parts and operating cost* are the main constraints.

3)- In order to cope with the existing financial constraints, most of the repair services of pipes and fittings that normally would be paid for in the market are performed through the well managed workshops located in Bagrami and Allaudin water supply areas. Highly experienced mechanics are working in these workshops.

In Bagrami workshop, they are able (have *the capacity*) to make locally used hand pumps that cane be installed in community wells for pumping water. This capacity is presently unused. This workshop belongs to OXFAM, and the interest of the government is if CARE accepts to take over the running of this asset as source of services.

4)- Unused scrape metal items has been collected and some organizational free assistance has been received and used in the system

- Some collected scrape pipes and iron beams have been used as an overpass and Bridge slap in Bagrami / Nasaji water system area.

- Use of a very large scrape fuel tanker found in Bagrami (Nasaji area) and fixed at *Allaudin* central compound for fuel storage.
- Three water tanker trucks donated by UNHCR were kept in Allaudin Pumping station compound for being used in any needed water distribution purposes.

The presently Unused Infrastructures of Kabul Water supply system

Some of the main water supply related investments in Kabul city, which are idle and unused, are as follows:

1)- From the three deep wells in *Nasaji* area restored by CARE one is non operative due to non availability of running cost.

2)-The other seven deep wells left non-restored / non-rehabilitated in Nesaji due to problems between the committed organizations and the government.

3)-A large 7000 m3 previously constructed reservoir in "*Karta-i-now*" hilltop.

4)-The two previously established non-rehabilitated deep wells in Allaudin.

5)- 7500 m3 large reservoir *of Allaudin* water supply system located in the south slope of the Kabul TV tower mountain is not used in full capacity.

6)- The University and the teacher training college wells that are in need for running cost.

7)- The existing underground main piping (reticulation) system in the main residential areas of Kabul. (Shar-*e-Nnow, Taiemini, Sharara...)*